



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,361	03/31/2000	Rajeev Koodli	NC17353	2371

7590 10/06/2003
Robert C Rolnik
Nokia Inc
6000 Connection Drive 1-4-755
Irving, TX 75039

EXAMINER

JAGANNATHAN, MELANIE

ART UNIT	PAPER NUMBER
----------	--------------

2666

DATE MAILED: 10/06/2003 7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/540,361

Applicant(s)

KOODLI, RAJEEV

Examiner

Melanie Jagannathan

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 12 and 23 is/are rejected.
- 7) ☒ Claim(s) 2-11 and 13-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Liebetreu et al. US 6,128,282.

The claimed sending rate estimate is disclosed by predictable data rate (Figure 2, element 41) of a digital data stream (element 32) sent to FIFO buffer (element 34). The claimed marking a packet to one of a plurality of priority levels based on sending rate estimate is disclosed by rate threshold window that defines the acceptable variance of rates of the queues in the buffer and if rate exceeds maximum rate, the processor removes a quantity of oldest bits in the queues in the buffer thus allowing other packets to be routed. See column 4, lines 22-48 and column 9, lines 7-31.

Art Unit: 2666

3. Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Lyon et al. US 6,333,917.

The claimed determining a first probability, determining at least one second probability and weighting each probability so that each probability contributes to a net probability is disclosed by each arriving packet being marked with a per-packet marking probability P_a and also a intermediate packet marking probability p_b to compute a final per-packet marking probability p_a . See column 2, lines 1-19.

Allowable Subject Matter

4. Claims 2-11, 13-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record does not disclose if determining if the sending rate is less than a first rate threshold and in response setting a probability of marking packet to a one of a plurality of priority levels, does not disclose if sending rate is between a first and second rate threshold, marking a packet such that a rate of packets marked a subordinate priority level is no greater than $1-(FRT/s)$, does not disclose if sending rate is greater than second rate threshold, marking a packet such that the rate of packets marked a second priority level is $(SRT - FRT)/s$ and rate of packets marked a lowest priority is at least $(s - SRT)/s$, does not disclose if sending rate is greater than the rate threshold, determining if a burst size is greater than a minimum burst and in response that burst size is greater than minimum burst marking the packet a first priority level.

Conclusion

Art Unit: 2666

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lyon et al. US 6,333,917 disclose a method for random early detection and marking of packets.

Eckberg, Jr. et al. US 4,769,810 disclose congestion control using packet marking.

Chimento, Jr. et al. US 5,434,848 disclose traffic management for multi-priority traffic.

Lefebvre et al. US 6,496,515 disclose method for prioritized data transmission.

Galand et al. US 6,188,698 disclose multiple criteria queuing.

Berthaud et al. US 6,011,776 disclose dynamic bandwidth estimation and marking probabilities.

Lee et al. US 6,790,521 discloses marking mechanism for controlling consecutive packet loss.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 703-305-8078. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Melanie Jagannathan
Patent Examiner
AU 2666

Application Number: 09/540,361

Art Unit: 2666

Page 5

MJ

A handwritten signature in cursive script, appearing to be 'ms' or similar.A handwritten signature in cursive script, appearing to be 'DMS'.

DANGTON
PRIMARY EXAMINER